Fw: Mobility and potential impacts of clothianidin as a seed treatment
Mah Shamim to: Karen McCormack 12/23/2010 12:37 PM

to ----------\Sent by EPA Wireless E-Mail Services.
Joseph Decant

----- Original Message -----
From: Joseph Decant
Sent: 12/16/2010 10:51 AM EST
To: Anita Pease; Mark Corbin; Michael Barrett; Allen Vaughan; Thomas Steeger; Mah Shamim
Subject: Fw: Mobility and potential impacts of clothianidin as a seed treatment

Ecologist, ERB V
Office of Pesticide Programs
Environmental Fate and Effects Division
US Environmental Protection Agency
Office: 703-347-8063
Mail Code 7507P
----- Forwarded by Joseph Decant/DC/USEPA/US on 12/16/2010 10:50 AM -----

From:	Jim Devries <j_devries@ducks.ca>
To:	Joseph Decant/DC/USEPA/US@EPA
Date:	12/14/2010 12:34 PM
Subject:	Mobility and potential impacts of clothianidin as a seed treatment

Joseph, further to our phone conversation, I have attached some recent publications on the fate and impact of the neonicotinoid, imidacloprid in aquatic systems. It seems that clothianidin has not been around long enough for similar research to have been conducted. The Kreutzweiser paper is of special interest given the demonstration of impact in aquatic systems from residues in shed plant tissues.

To reiterate, my concern stems from the widespread use of clothianidin as a seed treatment on canola in the Prairie Pothole Region of Canada and the United States (an estimated 8 million treated acres alone in prairie Canada in 2009). Our data indicate that anywhere from 30-40% of prairie wetlands (temporary and seasonal, specifically) can be cropped in many years. Thus, treated seed is likely placed directly into these wetland basins.

Further, given the fact that clothianidin remains present in all plant tissues, the fate of this chemical when the crop is harvested remains in question. Harvesting involves swathing the crop to allow the plant tissues to dry followed by complete threshing of the dried plant material to remove the seed. Residual plant material is then blown out the back of the combine (see attached photo). It seems highly likely that clothianidin bound in plant tissues may be distributed widely as airborne particulate, and fine ground residue may become very mobile in spring runoff or heavy fall rains.

Most of the regulatory notes I have seen regarding neonicotinoids as seed treatments downplay the potential for mobility once the seed is in the ground. I would contend this is a very short-sighted view and I strongly urge further investigation of the complete annual fate of these chemicals taking into consideration the fate in crop residue. This work should occur BEFORE approval. Intuitively, it seems

highly likely that neonicotinoids may be impacting many non target aquatic and terrestrial invertebrates with unknown ecological consequences.

Thanks in advance for any consideration you may give to these concerns.

Jim

Kreutzweiser et al imidicloprid in fallen leaves inhibits decomposers_2009 Ecotox Env Saf.pdf

Alexander et al_Imidacloprid effect on mayfly abundance, emergence and body size_FreshwaterBiology_2008.pdf

alexander et al_imidacloprid effects on feeding inhibition in mayfly and oligochaetes_2007_ETAC.pdf

van_Dijk_2010_Effects of neonicotinoids on non-target aquatic insects_MSc Thesis_Utrecht University.pdf

Canola Harvest.jpg

Canola Harvest2.jpg

Sardo and Soares_effects of imidacloprid on oligoachates_2010ArchEnvContTox.pdf

Stoughton et al_Toxicology of Imidacloprid to Chironomus and Hyalella_2008 ARCHENVCONTAMTOX.pdf

Tennekes_2010_Toxicology_7.pdf